

Abstract

A dispersion-compensated optical fiber which does not cause an increase in a loss if it is wound in a small reel and has a stable temperature characteristics is provided. A dispersion-compensated optical fiber is formed such that, in at least a wavelength between 1.53 to 1.63 μm , a bending loss of 20 mm bending diameter is 5 dB/m or lower, a wavelength dispersion is -120 ps/nm/km or lower, a cut-off wavelength under a usage condition is 1.53 μm or lower, an outer diameter of the cladding is 80 to 100 μm , an outer diameter of a coating is 160 to 200 μm , a viscosity of a surface of a coating resin is 10 gf/mm or lower. It is set such that b/a is 1.5 to 3.5, c/b is 1.2 to 2.0, a radius of a core is 4 to 8 μm , Δ_1 is +1.6% to +2.6%, Δ_2 is -0.30% to -1.4%, and Δ_3 is -0.30% to +1.0%. Young's modulus of a first coating layer is 0.15 kgf/mm² or lower and its thickness is 20 to 30 μm . Young's modulus of a second coating layer is 50 kgf/mm² or lower and its thickness is 15 to 30 μm .